



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

NORTHERN REGIONAL OFFICE

13901 Crown Court, Woodbridge, Virginia 22193

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Douglas W. Domenech
Secretary of Natural Resources

David K. Paylor
Director

Thomas A. Faha
Regional Director

November 23, 2010

Mr. Edward O'Brien
2301 Wyoming Ave NW
Washington DC 20008

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Re: Reissuance of VPDES Permit No. VA0088749
Boston Water & Sewer STP, Culpeper County

Dear Mr. O'Brien:

The Department of Environmental Quality (DEQ) has approved the enclosed effluent limitations and monitoring requirements for the above-referenced permit. This permit supersedes the previous VPDES Permit VA0088749 issued to this facility. Copies of your permit and fact sheet are enclosed.

A Discharge Monitoring Report (DMR) form is no longer included in the reissuance package. DEQ has launched an electronic DMR (e-DMR) program that allows you to submit the effluent monitoring data electronically, and we expect every permittee to use e-DMR as permits are issued or reissued. The first electronic DMR submittal for the month of January 2011 is due by February 10, 2011. Please reference the effluent limits in your permit and report monitoring results in e-DMR to the same number of significant digits as are included in the permit limits for the parameter. Answers to frequently asked questions about the e-DMR system, including the e-DMR registration process, are available at <http://www.deq.virginia.gov/water/edmrfaq.html>. The regional contact for e-DMR is Rebecca Vice; she can be reached at (703) 583-3922 or by e-mail at Rebecca.Vice@deq.virginia.gov.

Please note that compliance with the permit's requirements for use and disposal of sewage sludge do not relieve you of your responsibility to comply with federal requirements set forth in 40 CFR Part 503. Until DEQ seeks and is granted authority to administer the Part 503 regulations by EPA, treatment works treating domestic sewage should continue to work directly with EPA to comply with them.

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have thirty days from the date of service (the date you actually received this decision or the date it was mailed to you, whichever occurred first) within which to appeal this decision by filing a notice of appeal in accordance with the Rules of the Supreme Court of Virginia with the Director, Department of Environmental Quality. In the event that this decision is served on you by mail, three days are added to that period.

Alternately, any owner under §§ 62.1-44.16, 62.1-44.17, and 62.1-44.19 of the State Water Control Law aggrieved by any action of the State Water Control Board taken without a formal hearing, or by inaction of the Board, may demand in writing a formal hearing of such owner's grievance, provided a petition requesting such hearing is filed with the Board. Said petition must meet the requirements set forth in §1.23(b) of the Board's Procedural Rule No. 1. In cases involving actions of the Board, such petition must be filed within thirty days after notice of such action is mailed to such owner by certified mail.

A Reliability Class I is assigned to this facility and this facility has Class II licensed operator requirements.

If you have questions about the permit, please contact Alison Thompson at (703)583-3834, or by E-mail at Alison.Thompson@deq.virginia.gov.

Respectfully,



Bryant Thomas
Water Permits Manager

Enc.: Permit No. VA0088749

cc: DEQ-Water, OWPP
EPA-Region III, 3WP12
Department of Health, Culpeper
Water Compliance, NRO



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Permit No. **VA0088749**
Effective Date: **December 8, 2010**
Expiration Date: **December 7, 2015**

AUTHORIZATION TO DISCHARGE UNDER THE VIRGINIA POLLUTANT DISCHARGE ELIMINATION SYSTEM AND THE VIRGINIA STATE WATER CONTROL LAW

In compliance with the provisions of the Clean Water Act as amended and pursuant to the State Water Control Law and regulations adopted pursuant thereto, the following owner is authorized to discharge in accordance with the information submitted with the permit application, and with this permit cover page, Part I – Effluent Limitations and Monitoring Requirements, and Part II – Conditions Applicable To All VPDES Permits, as set forth herein.

Owner Name: Boston Water & Sewer STP
Facility Name: Boston Water & Sewer STP
County: Culpeper
Facility Location: 1 mile SSW of the intersection of Routes 522 and 707

The owner is authorized to discharge to the following receiving stream:

Stream Name: Hazel River
River Basin: Rappahannock
River Subbasin: Not Applicable
Section: 4
Class: III
Special Standards: None

A handwritten signature in black ink, appearing to read "Thomas A. Faha".

Thomas A. Faha
Director, Northern Regional Office
Department of Environmental Quality

November 23, 2010
Date

A. Effluent Limitations and Monitoring Requirements**2. Outfall 001 – 0.15 MGD Facility**

- a. There shall be no discharge of floating solids or visible foam in other than trace amounts.
- b. In addition to any Total Nitrogen or Total Phosphorus concentration limits (or monitoring requirements without associated limits) listed above, this facility has Total Nitrogen and Total Phosphorus calendar year load limits associated with this outfall included in the current Registration List under registration number VAN020111, enforceable under the General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Dischargers and Nutrient Trading in the Chesapeake Watershed in Virginia.
- c. During the period beginning with the issuance of the CTO for the 0.15 MGD facility and lasting until the issuance of the CTO for the 0.25 or 0.45 MGD tiers or the expiration date, whichever occurs first, the permittee is authorized to discharge from Outfall Number 001. Such discharges shall be limited and monitored by the permittee as specified below.

Parameter	Discharge Limitations					Monitoring Requirements		
	Monthly Average ⁽¹⁾		Weekly Average ⁽¹⁾		Minimum	Maximum ⁽¹⁾	Frequency	Sample Type
Flow ⁽²⁾ (MGD)	NL		NA		NA	NL	Continuous	TIRE
pH	NA		NA		6.0 S.U.	9.0 S.U.	1/D	Grab
CBOD ₅ (Jun-Nov)	5 mg/L	2.8 kg/day	8 mg/L	4.5 kg/day	NA	NA	3D/W	8H-C
BOD ₅ (Dec-May)	30 mg/L	17 kg/day	45 mg/L	26 kg/day	NA	NA	3D/W	8H-C
Total Suspended Solids, TSS (Jun-Nov)	5.0 mg/L	2.8 kg/day	7.5 mg/L	4.5 kg/day	NA	NA	3D/W	8H-C
Total Suspended Solids, TSS (Dec-May)	30 mg/L	17 kg/day	45 mg/L	26 kg/day	NA	NA	3D/W	8H-C
Total Kjeldahl Nitrogen, TKN (Jun-Nov)	3.0 mg/L	1.7 kg/day	4.5 mg/L	2.6 kg/day	NA	N/A	3D/W	8H-C
Total Kjeldahl Nitrogen, TKN (Dec-May)	10 mg/L	5.7 kg/day	15 mg/L	8.5 kg/day	NA	N/A	3D/W	8H-C
Dissolved Oxygen	NA		NA		6.8 mg/L	NA	1/D	Grab
Total Residual Chlorine (after contact tank)	NA		NA		1.0 mg/L	NA	3/D at 4 hour intervals	Grab
Total Residual Chlorine (after dechlorination)	0.010 mg/L		0.013 mg/L		NA	NA	3/D at 4 hour intervals	Grab
<i>E. coli</i> (Geometric Mean) ⁽⁴⁾	126 n/100 mLs		NA		NA	NA	1/W	Grab
NO ₂ + NO ₃ as Nitrogen	NL (mg/L)		NA		NA	NA	2/M	8H-C
Total Nitrogen ⁽⁵⁾	NL (mg/L)		NA		NA	NA	2/M	Calculated
Total Nitrogen – Year to Date ⁽⁶⁾	NL (mg/L)		NA		NA	NA	1/M	Calculated
Total Nitrogen – Calendar Year ⁽⁶⁾	8.0 (mg/L)		NA		NA	NA	1/YR	Calculated
Total Phosphorus	NL (mg/L)		NA		NA	NA	2/M	8H-C
Total Phosphorus – Year to Date ⁽⁶⁾	NL (mg/L)		NA		NA	NA	1/M	Calculated
Total Phosphorus – Calendar Year ⁽⁶⁾	1.0 (mg/L)		NA		NA	NA	1/YR	Calculated
Chronic Toxicity – <i>C. dubia</i> (TU _c) ⁽³⁾	NA		NA		NA	NL	1/3M	8H-C
Chronic Toxicity – <i>P. promelas</i> (TU _c) ⁽³⁾	NA		NA		NA	NL	1/3M	8H-C

⁽¹⁾ See Part I.B.

MGD = Million gallons per day.

1/D = Once every day.

⁽²⁾ The design flow is 0.15 MGD.

NA = Not applicable.

3/D = Three times every day.

⁽³⁾ See Part I.C. for toxicity monitoring requirements

NL = No limit; monitor and report.

1/W = Once every week.

⁽⁴⁾ See Part I.B.1.e. if chlorine is not used for disinfection

1/M = Once every month.

⁽⁵⁾ Total Nitrogen is the sum of Total Kjeldahl Nitrogen and NO₂+NO₃ Nitrogen and shall be calculated from the results of those tests.

S.U. = Standard units.

2/M = Twice every month, > 7 days apart.

TIRE = Totalizing, indicating and recording equipment.

3D/W = Three days every week.

1/3M = Once every three months.

1/YR = Once every year.

⁽⁶⁾ See Part I.B.4. for nutrient reporting calculations. The calendar year annual averages for Total Nitrogen and Total Phosphorus are effective January 1st of the year after issuance of the CTO for the expanded facility.

8H-C = A flow proportional composite sample collected manually or automatically, and discretely or continuously, for the entire discharge of the monitored 8-hour period. Where discrete sampling is employed, the permittee shall collect a minimum of eight (8) aliquots for compositing. Discrete sampling may be flow proportioned either by varying the time interval between each aliquot or the volume of each aliquot. Time composite samples consisting of a minimum of eight (8) grab samples obtained at hourly or smaller intervals may be collected where the permittee demonstrates that the discharge flow rate (gallons per minute) does not vary by 10% or more during the monitored discharge.

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

A. Effluent Limitations and Monitoring Requirements**2. Outfall 001 – 0.25 MGD Facility**

- a. There shall be no discharge of floating solids or visible foam in other than trace amounts.
- b. In addition to any Total Nitrogen or Total Phosphorus concentration limits (or monitoring requirements without associated limits) listed above, this facility has Total Nitrogen and Total Phosphorus calendar year load limits associated with this outfall included in the current Registration List under registration number VAN020111, enforceable under the General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Dischargers and Nutrient Trading in the Chesapeake Watershed in Virginia.
- c. During the period beginning with the issuance of the CTO for the 0.25 MGD facility and lasting until the issuance of the CTO for the 0.45 MGD tiers or the expiration date, whichever occurs first, the permittee is authorized to discharge from Outfall Number 001. Such discharges shall be limited and monitored by the permittee as specified below.

Parameter	Discharge Limitations				Monitoring Requirements	
	Monthly Average ⁽¹⁾		Weekly Average ⁽¹⁾		Frequency	Sample Type
Flow ⁽²⁾ (MGD)	NL		NA		NL	Continuous
pH	NA		NA		6.0 S.U.	9.0 S.U.
CBOD ₅ (Jun-Nov)	5 mg/L	4.7 kg/day	8 mg/L	7.6 kg/day	NA	NA
BOD ₅ (Dec-May)	30 mg/L	28 kg/day	45 mg/L	43 kg/day	NA	NA
Total Suspended Solids, TSS (Jun-Nov)	5.0 mg/L	4.7 kg/day	7.5 mg/L	7.1 kg/day	NA	NA
Total Suspended Solids, TSS (Dec-May)	30 mg/L	28 kg/day	45 mg/L	43 kg/day	NA	NA
Total Kjeldahl Nitrogen, TKN (Jun-Nov)	3.0 mg/L	2.8 kg/day	4.5 mg/L	4.2 kg/day	NA	N/A
Total Kjeldahl Nitrogen, TKN (Dec-May)	10 mg/L	9.5 kg/day	15 mg/L	14 kg/day	NA	N/A
Dissolved Oxygen	NA		NA		6.8 mg/L	NA
Total Residual Chlorine (after contact tank)	NA		NA		1.0 mg/L	NA
Total Residual Chlorine (after dechlorination)	0.007 mg/L		0.009 mg/L		NA	NA
<i>E. coli</i> (Geometric Mean) ⁽⁴⁾	126 n/100 mLs		NA		NA	NA
NO ₂ + NO ₃ as Nitrogen	NL (mg/L)		NA		NA	NA
Total Nitrogen ⁽⁵⁾	NL (mg/L)		NA		NA	NA
Total Nitrogen – Year to Date ⁽⁶⁾	NL (mg/L)		NA		NA	NA
Total Nitrogen – Calendar Year ⁽⁶⁾	8.0 (mg/L)		NA		NA	NA
Total Phosphorus	NL (mg/L)		NA		NA	NA
Total Phosphorus – Year to Date ⁽⁶⁾	NL (mg/L)		NA		NA	NA
Total Phosphorus – Calendar Year ⁽⁶⁾	1.0 (mg/L)		NA		NA	NA
Chronic Toxicity – <i>C. dubia</i> (TU _c) ⁽³⁾	NA		NA		NA	NL
Chronic Toxicity – <i>P. promelas</i> (TU _c) ⁽³⁾	NA		NA		NA	NL

(1) See Part I.B.

MGD = Million gallons per day.

1/D = Once every day.

(2) The design flow is 0.25 MGD.

NA = Not applicable.

3/D = Three times every day.

(3) See Part I.C. for toxicity monitoring requirements

NL = No limit; monitor and report.

1/W = Once every week.

(4) See Part I.B.1.e. if chlorine is not used for disinfection

1/M = Once every month.

(5) Total Nitrogen is the sum of Total Kjeldahl Nitrogen and NO₂+NO₃ Nitrogen and shall be calculated from the results of those tests.

S.U. = Standard units.

2/M = Twice every month, > 7 days apart.

TIRE = Totalizing, indicating and recording equipment.

3D/W = Three days every week.

1/3M = Once every three months.

1/YR = Once every year.

(6) See Part I.B.4. for nutrient reporting calculations. The calendar year annual averages for Total Nitrogen and Total Phosphorus are effective January 1st of the year after issuance of the CTO for the expanded facility.

8H-C = A flow proportional composite sample collected manually or automatically, and discretely or continuously, for the entire discharge of the monitored 8-hour period. Where discrete sampling is employed, the permittee shall collect a minimum of eight (8) aliquots for compositing. Discrete sampling may be flow proportioned either by varying the time interval between each aliquot or the volume of each aliquot. Time composite samples consisting of a minimum of eight (8) grab samples obtained at hourly or smaller intervals may be collected where the permittee demonstrates that the discharge flow rate (gallons per minute) does not vary by 10% or more during the monitored discharge.

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

A. Effluent Limitations and Monitoring Requirements**2. Outfall 001 – 0.45 MGD Facility**

- a. There shall be no discharge of floating solids or visible foam in other than trace amounts.
- b. In addition to any Total Nitrogen or Total Phosphorus concentration limits (or monitoring requirements without associated limits) listed above, this facility has Total Nitrogen and Total Phosphorus calendar year load limits associated with this outfall included in the current Registration List under registration number VAN020111, enforceable under the General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Dischargers and Nutrient Trading in the Chesapeake Watershed in Virginia.
- c. During the period beginning with the issuance of the CTO for the 0.45 MGD facility and lasting until the permit's expiration date, the permittee is authorized to discharge from Outfall Number 001. Such discharges shall be limited and monitored by the permittee as specified below.

Parameter	Discharge Limitations				Monitoring Requirements	
	Monthly Average ⁽¹⁾		Weekly Average ⁽¹⁾		Frequency	Sample Type
Flow ⁽²⁾ (MGD)	NL		NA		Continuous	TIRE
pH	NA		NA		1/D	Grab
CBOD ₅ (Jun-Nov)	3 mg/L	5.1 kg/day	4 mg/L	6.8 kg/day	NA	NA
BOD ₅ (Dec-May)	30 mg/L	51 kg/day	45 mg/L	77 kg/day	NA	NA
Total Suspended Solids, TSS (Jun-Nov)	5.0 mg/L	8.5 kg/day	7.5 mg/L	13 kg/day	NA	NA
Total Suspended Solids, TSS (Dec-May)	30 mg/L	51 kg/day	45 mg/L	77 kg/day	NA	NA
Total Kjeldahl Nitrogen, TKN (Jun-Nov)	3.0 mg/L	5.1 kg/day	4.5 mg/L	7.7 kg/day	NA	N/A
Total Kjeldahl Nitrogen, TKN (Dec-May)	10 mg/L	17 kg/day	15 mg/L	26 kg/day	NA	N/A
Dissolved Oxygen	NA		NA		7.2 mg/L	NA
Total Residual Chlorine (after contact tank)	NA		NA		1.0 mg/L	NA
Total Residual Chlorine (after dechlorination)	0.005 mg/L		0.006 mg/L		NA	NA
<i>E. coli</i> (Geometric Mean) ⁽⁴⁾	126 n/100 mLs		NA		NA	NA
NO ₂ + NO ₃ as Nitrogen	NL (mg/L)		NA		NA	NA
Total Nitrogen ⁽⁵⁾	NL (mg/L)		NA		NA	NA
Total Nitrogen – Year to Date ⁽⁶⁾	NL (mg/L)		NA		NA	NA
Total Nitrogen – Calendar Year ⁽⁶⁾	8.0 (mg/L)		NA		NA	NA
Total Phosphorus	NL (mg/L)		NA		NA	NA
Total Phosphorus – Year to Date ⁽⁶⁾	NL (mg/L)		NA		NA	NA
Total Phosphorus – Calendar Year ⁽⁶⁾	1.0 (mg/L)		NA		NA	NA
Chronic Toxicity – <i>C. dubia</i> (TU _c) ⁽³⁾	NA		NA		NA	NL
Chronic Toxicity – <i>P. promelas</i> (TU _c) ⁽³⁾	NA		NA		NA	NL

⁽¹⁾ See Part I.B.

MGD = Million gallons per day.

1/D = Once every day.

⁽²⁾ The design flow is 0.45 MGD.

NA = Not applicable.

3/D = Three times every day.

⁽³⁾ See Part I.C. for toxicity monitoring requirements

NL = No limit; monitor and report.

1/W = Once every week.

⁽⁴⁾ See Part I.B.1.e. if chlorine is not used for disinfection

1/M = Once every month.

⁽⁵⁾ Total Nitrogen is the sum of Total Kjeldahl Nitrogen and NO₂+NO₃ Nitrogen and shall be calculated from the results of those tests.

S.U. = Standard units.

2/M = Twice every month, > 7 days apart.

TIRE = Totalizing, indicating and recording equipment.

3D/W = Three days every week.

1/3M = Once every three months.

1/YR = Once every year.

⁽⁶⁾ See Part I.B.4. for nutrient reporting calculations. The calendar year annual averages for Total Nitrogen and Total Phosphorus are effective January 1st of the year after issuance of the CTO for the expanded facility.

8H-C = A flow proportional composite sample collected manually or automatically, and discretely or continuously, for the entire discharge of the monitored 8-hour period. Where discrete sampling is employed, the permittee shall collect a minimum of eight (8) aliquots for compositing. Discrete sampling may be flow proportioned either by varying the time interval between each aliquot or the volume of each aliquot. Time composite samples consisting of a minimum of eight (8) grab samples obtained at hourly or smaller intervals may be collected where the permittee demonstrates that the discharge flow rate (gallons per minute) does not vary by 10% or more during the monitored discharge.

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

B. Additional Monitoring Requirements, Quantification Levels and Compliance Reporting**1. Additional Total Residual Chlorine (TRC) Limitations and Monitoring Requirements**

- a. The permittee shall monitor the TRC at the outlet of the chlorine contact tank once per day by grab sample.
- b. No more than nine (9) taken at the outlet of the chlorine contact tank shall be less than 1.0 mg/L for any one calendar month.
- c. No TRC sample collected at the outlet of the chlorine contact tank shall be less than 0.6 mg/L.
- d. If dechlorination facilities exist the samples above shall be collected prior to dechlorination.
- e. If chlorine disinfection is not used, *E. coli* shall be limited and monitored by the permittee as specified below:

<u>Flow Tier</u>	<u>Discharge Limitations</u> <u>Monthly Average</u> <u>For <i>E. coli</i></u>	<u>Monitoring</u> <u>Frequency</u> <u>Requirements</u>	<u>Sample Type</u>
0.075 MGD	126 n/100ml	2D/W	Grab
	Geometric Mean	Twice every week	Between 10 AM & 4 PM
0.15, 0.25, and	126 n/100ml	3D/W	Grab
0.45 MGD	Geometric Mean	Three days a week	Between 10 AM & 4 PM

This *E. coli* requirement, if applicable, shall substitute for the TRC requirements delineated elsewhere in Part I.

2. Quantification Levels

- a. The quantification levels (QL) shall be less than or equal to the following concentrations:

<u>Characteristic</u>	<u>Quantification Level</u>
TSS	1.0 mg/L
CBOD5/BOD5	5 mg/L
Ammonia	0.20 mg/L
TRC	0.10 mg/L

- b. The QL is defined as the lowest concentration used to calibrate a measurement system in accordance with the procedures published for the method. The permittee shall use any method in accordance with Part II A of this permit.
- c. It is the responsibility of the permittee to ensure that proper quality assurance/quality control (QA/QC) protocols are followed during the sampling and analytical procedures. QA/QC information shall be documented to confirm that appropriate analytical procedures have been used and the required QLs have been attained.

3. Compliance Reporting for parameters in Part I.A.

- a. Monthly Average – Compliance with the monthly average limitations and/or reporting requirements for the parameters listed in Part I.B.2.a. shall be determined as follows: All concentration data below the QL of the measurement system shall be treated as zero. All concentration data equal to or above the QL shall be treated as it is reported. An arithmetic average shall be calculated using all reported data for the month, including the defined zeros. This arithmetic average shall be reported on the Discharge

Monitoring Report (DMR) as calculated. If all data are below the QL, then the average shall be reported as "<QL". If reporting for quantity is required on the DMR and the reported monthly average concentration is <QL, then report "<QL" for the quantity. Otherwise use the reported concentration data (including the defined zeros) and flow data for each sample day to determine the daily quantity and report the monthly average of the calculated daily quantities.

- b. Maximum Weekly Average – Compliance with the weekly average limitations and/or reporting requirements for the parameters listed in Part I.B.2.a. shall be determined as follows: All concentration data below the QL of the measurement system shall be treated as zero. All concentration data equal to or above the QL shall be treated as reported. An arithmetic average shall be calculated using all reported data, including the defined zeros, collected within each complete calendar week and entirely contained within the reporting month. The maximum value of the weekly averages thus determined shall be reported on the DMR. If all data are below the QL, then the weekly average shall be reported as "<QL". If reporting for quantity is required on the DMR and the reported weekly average concentration is <QL, then report "<QL" for the quantity. . Otherwise use the reported concentration data (including the defined zeros) and flow data for each sample day to determine the daily quantity and report the maximum weekly average of the calculated daily quantities.
- c. Single Datum - Any single datum required shall be reported as <QL if it is less than the QL in a. above. Otherwise the numerical value shall be reported.
- d. Significant Digits - The permittee shall report at least the same number of significant digits as the permit limit for a given parameter. Regardless of the rounding convention used (i.e., 5 always rounding up or to the nearest even number) by the permittee, the permittee shall use the convention consistently, and shall ensure that consulting laboratories employed by the permittee use the same convention.

4. Nutrient Reporting Calculations for Part I. A.

- a. For each calendar month, the DMR shall show the calendar year-to-date average concentration (mg/L) calculated in accordance with the following formulae:

$$MC_{avg}\text{-YTD} = (\sum_{(Jan\text{-current month})} MC_{avg}) \div (\# \text{ of months})$$

where:

$MC_{avg}\text{-YTD}$ = calendar year-to-date average concentration (mg/L)

MC_{avg} = monthly average concentration (mg/L) as reported on DMR

- b. The total nitrogen and phosphorus average concentrations (mg/L) for each calendar year (AC) shall be shown on the December DMR due January 10th of the following year. These values shall be calculated in accordance with the following formulae:

$$AC_{avg} = (\sum_{(Jan\text{-Dec})} MC_{avg}) \div 12$$

where:

AC_{avg} = calendar year average concentration (mg/L)

MC_{avg} = monthly average concentration (mg/L) as reported on DMR

- c. For Total Phosphorus, all daily concentration data below the quantification level (QL) for the analytical method used should be treated as half the QL. All daily concentration data equal to or above the QL for the analytical method used shall be treated as it is reported.
- d. For Total Nitrogen (TN), if none of the daily concentration data for the respective species (i.e., TKN, Nitrates/Nitrites) are equal to or above the QL for the respective analytical methods used, the daily TN

concentration value reported shall equal one half of the largest QL used for the respective species. If one of the data is equal to or above the QL, the daily TN concentration value shall be treated as that data point is reported. If more than one of the data is above the QL, the daily TN concentration value shall equal the sum of the data points as reported.

C. Toxics Monitoring Program Requirements

Biological Monitoring for Outfall 001

1. Commencing within six (6) months of the CTO issuance for the 0.075 MGD, 0.15 MGD, 0.25 MGD, or the 0.45 MGD facility, the permittee shall conduct eight quarterly chronic toxicity tests. The permittee shall collect 4-hour (0.075 MGD) or 8-hour (0.15, 0.25, or 0.45 MGD) flow-proportioned composite samples of final effluent from Outfall 001.

The chronic tests to use are:

Chronic 3-Brood Static Renewal Survival and Reproduction Test using *Ceriodaphnia dubia*.
Chronic 7-Day Static Renewal Survival and Growth Test using *Pimephales promelas*.

These chronic tests shall be conducted in such a manner and at sufficient dilutions (minimum of five dilutions) to determine the "No Observed Effect Concentration" (NOEC) for survival and reproduction or growth. Results which cannot be quantified (i.e., a "less than" NOEC value) are not acceptable and a retest shall be performed. The NOEC as determined by hypothesis testing shall be converted to TU_c (Chronic Toxic Units) for DMR reporting where $TU_c = 100/\text{NOEC}$. Report the LC_{50} at 48 hours and the IC_{25} with the NOEC's in the test report.

2. The permittee may provide additional samples to address data variability. These data shall be reported. Test procedures and reporting shall be in accordance with the WET testing methods cited in 40 CFR 136.3.
3. The test dilutions shall include and bracket the following endpoint:

Chronic NOEC $\geq 26\%$; equivalent to $TU_c \leq 3.84$.

4. Should the results of any test exceed the endpoint cited above, the permittee shall conduct a retest of the effluent within 30 days.
5. The permittee shall report the results of the test on the DMR for the month following receipt of the results and shall supply one (1) copy of the toxicity test report. In no case shall this exceed 45 days from the completion of the test.
6. After completion of eight quarterly samples, the permittee may submit a written request to DEQ-NRO for a reduction or suspension in the sampling frequency.

D. Other Requirements and Special Conditions

1. 95% Capacity Reopener

A written notice and a plan of action for ensuring continued compliance with the terms of this permit shall be submitted to the Northern Regional Office when the monthly average flow influent to the sewage treatment plant reaches 95 percent of the design capacity authorized in this permit for each month of any three consecutive month period. The written notice shall be submitted within 30 days and the plan of action shall be received at the Northern Regional Office no later than 90 days from the third consecutive month for which the flow reached 95 percent of the design capacity. The plan shall include the necessary steps and a prompt

prompt schedule of implementation for controlling any current or reasonably anticipated problem resulting from high influent flows. Failure to submit an adequate plan in a timely manner shall be deemed a violation of this permit.

2. Indirect Dischargers

The permittee shall provide adequate notice to the Department of the following:

- a. Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Section 301 or 306 of Clean Water Act and the State Water Control Law if it were directly discharging those pollutants; and
- b. Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of this permit.
- c. Adequate notice shall include information on (i) the quality and quantity of effluent introduced into the treatment works, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the treatment works.

3. Operation and Maintenance (O&M) Manual Requirement

The permittee shall develop an Operations and Maintenance (O & M) Manual for the treatment works. The permittee will maintain an accurate, approved operation and maintenance manual for the treatment works. This manual shall detail the practices and procedures which will be followed to ensure compliance with the requirements of this permit. The manual shall be submitted to the DEQ Regional Office for approval within 90 days of the issuance of the Certificate to Operate. The permittee shall operate the treatment works in accordance with the approved O & M Manual. This manual shall include, but not necessarily be limited to, the following items, as appropriate:

- a. Techniques to be employed in the collection, preservation, and analysis of effluent samples (and sludge samples if sludge analyses are required);
- b. Procedures for measuring and recording the duration and volume of treated wastewater discharged;
- c. Discussion of Best Management Practices, if applicable;
- d. Procedures for handling, storing, and disposing of all wastes, fluids, and pollutants that will prevent these materials from reaching state waters.
- e. Treatment works design, treatment works operation, routine preventive maintenance of units within the treatment works, critical spare parts inventory and record keeping; and,
- f. A plan for the management and/or disposal of waste solids and residues.

Any changes in the practices and procedures followed by the permittee shall be documented and submitted for DEQ Northern Regional Office staff approval within 90 days of the effective date of the changes. Upon approval of the submitted manual changes, the revised manual becomes an enforceable part of the permit. Noncompliance with the O&M Manual shall be deemed a violation of the permit.

4. Licensed Operator Requirement

The permittee shall employ or contract at least one Class II licensed wastewater works operator for this facility. The license shall be issued in accordance with Title 54.1 of the Code of Virginia and the regulations of the Board for Waterworks and Wastewater Works Operators. The permittee shall notify the Department in writing whenever he is not complying, or has grounds for anticipating he will not comply with this requirement. The notification shall include a statement of reasons and a prompt schedule for achieving compliance.

5. Reliability Class

The permitted treatment works shall meet Reliability Class I.

6. CTC and CTO Requirement

In accordance with *Sewage Collection and Treatment* regulation (9VAC25-790), the permittee shall obtain a Certificate to Construct (CTC) and a Certificate to Operate (CTO) from the Department of Environmental Quality prior to constructing wastewater treatment works and operating the treatment works, respectively. Non-compliance with the CTC or CTO shall be deemed a violation of the permit.

7. Water Quality Criteria Reopener

Should effluent monitoring indicate the need for any water quality-based limitations, this permit may be modified or alternatively revoked and reissued to incorporate appropriate limitations.

8. Water Quality Criteria Monitoring

The permittee shall monitor the effluent at Outfall 001 for the substances noted in Attachment A, "Water Quality Criteria Monitoring" according to the indicated analysis number, quantification level, sample type and frequency. Monitoring shall be initiated after the start of the third year from the permit's effective date. Using Attachment A as the reporting form, the data shall be submitted with the next application for reissuance, which is due at least 180 days prior to the expiration date of this permit. Monitoring and analysis shall be conducted in accordance with 40 CFR Part 136 or alternative EPA approved methods. It is the responsibility of the permittee to ensure that proper QA/QC protocols are followed during the sample gathering and analytical procedures. The DEQ will use these data for making specific permit decisions in the future. This permit may be modified or, alternatively, revoked and reissued to incorporate limits for any of the substances listed in Attachment A.

9. Sludge Reopener

The Board may promptly modify or revoke and reissue this permit if any applicable standard for sewage sludge use or disposal promulgated under Section 405(d) of the Clean Water Act is more stringent than any requirements for sludge use or disposal in this permit, or controls a pollutant or practice not limited in this permit.

10. Sludge Use and Disposal

The permittee shall, within 120 days of the completion of construction, submit for DEQ and Department of Health approval a revised Sludge Management Plan (SMP). The SMP shall include information on sewage sludge and biosolids sampling and testing, operational testing and control and recordkeeping necessary to document the quality and proper use and disposal of sewage sludge and biosolids. The permittee shall conduct all biosolids use and disposal activities in accordance with the approved SMP, which becomes an enforceable part of the permit upon approval.

11. Instream Monitoring

The permittee shall submit an instream monitoring plan to the DEQ within 90 days of the issuance of the CTO for the facility. The monitoring plan shall include at a minimum the following: a topographic map with the approximate sampling station location as well as a description of the station location, sampling and analysis protocols, and a sampling schedule. The sampling station must be downstream of the outfall at a point where the receiving stream and the effluent are completely mixed.

Upon approval of the plan, the permittee shall begin the monitoring program and sample the following parameters on a monthly basis: pH, dissolved oxygen, temperature, and total hardness. The results of the analyses are to be reported with the DMR for the month that the sampling was conducted.

12. Total Maximum Daily Load (TMDL) Reopener

This permit shall be modified or alternatively revoked and reissued if any approved wasteload allocation procedure, pursuant to Section 303(d) of the Clean Water Act, imposes wasteload allocations, limits or conditions on the facility that are not consistent with the permit requirements.

13. Nutrient Offsets

Any annual Total Nitrogen and/or Total Phosphorus loadings above and beyond those permitted prior to July 1, 2005 shall be offset subject to a DEQ-approved trading contract prepared in accordance with 62.1-44.19:12 - :19 of the Law and 9VAC25-820-10 et seq., and which includes, but not limited to, the following:

- a. Discussion of the source of the acquired allocations,
- b. Discussion of other permitted facilities involved in the trade, and
- c. Discussion of any non-point source allocations acquired.

This proposal shall provide for the waste loads that are projected to be discharged on an annual basis for the term of this permit, and shall be approved prior to the commencement of discharge from the new or expanded facility. Once approved, the conditions of the proposal pertaining to verification of non-point allocations acquired, or self-offsetting practices implemented, become an enforceable part of this permit.

14. E3/E4

The annual average concentration limitations for Total Nitrogen and/or Total Phosphorus are suspended during any calendar year in which the facility is considered by DEQ to be a participant in the Virginia Environmental Excellence Program in good standing at either the Exemplary Environmental Enterprise (E3) level or the Extraordinary Environmental Enterprise (E4) level, provided that the following conditions have also been met:

- a. The facility has applied for (or renewed) participation, been accepted, maintained a record of sustained compliance and submitted an annual report according to the program guidelines;
- b. The facility has demonstrated that they have in place a fully implemented environmental management system (EMS) with an alternative compliance method that includes operation of installed nutrient removal technologies to achieve the annual average concentration limitations; and
- c. The E3/E4 designation from DEQ and implementation of the EMS has been in effect for the full calendar year.

The annual average concentration limitations for Total Nitrogen and/or Phosphorus, as applicable, are not suspended in any calendar year following a year in which the facility failed to achieve the annual average concentration limitations as required by b. above.

15. Nutrient Reopener

This permit may be modified or, alternatively, revoked and reissued:

- a. If any approved wasteload allocation procedure, pursuant to Section 303(d) of the Clean Water Act, imposes wasteload allocations, limits or conditions on the facility that are not consistent with the permit requirements;
- b. To incorporate technology-based effluent concentration limitations for nutrients in conjunction with the installation of nutrient control technology, whether by new construction, expansion or upgrade, or
- c. To incorporate alternative nutrient limitations and/or monitoring requirements, should:
 - i. the State Water Control Board adopt new nutrient standards for the water body receiving the discharge, including the Chesapeake Bay or its tributaries, or
 - ii. a future water quality regulation or statute require new or alternative nutrient control.

16. Treatment Works Closure Plan

The permit requires the closure of the existing Boston Water & Sewer STP, VA0065358. The permittee shall submit to the Department of Environmental Quality-Northern Regional Office a facility closure plan for the existing STP. The plan shall be submitted within 30 days of the issuance of the Certificate to Construct (CTC) for the Boston Water & Sewer STP, VA0088749. The existing STP's closure shall coincide with the issuance of the Certificate to Operate (CTO) for the Boston Water & Sewer STP facility, VA0088749.

CONDITIONS APPLICABLE TO ALL VPDES PERMITS

A. Monitoring

1. Samples and measurements taken as required by this permit shall be representative of the monitored activity.
2. Monitoring shall be conducted according to procedures approved under Title 40 Code of Federal Regulations Part 136 or alternative methods approved by the U.S. Environmental Protection Agency, unless other procedures have been specified in this permit.
3. The permittee shall periodically calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals that will insure accuracy of measurements.

B. Records

1. Records of monitoring information shall include:
 - a. The date, exact place, and time of sampling or measurements;
 - b. The individual(s) who performed the sampling or measurements;
 - c. The date(s) and time(s) analyses were performed;
 - d. The individual(s) who performed the analyses;
 - e. The analytical techniques or methods used; and
 - f. The results of such analyses.
2. Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years, the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period of retention shall be extended automatically during the course of any unresolved litigation regarding the regulated activity or regarding control standards applicable to the permittee, or as requested by the Board.

C. Reporting Monitoring Results

1. The permittee shall submit the results of the monitoring required by this permit not later than the 10th day of the month after monitoring takes place, unless another reporting schedule is specified elsewhere in this permit. Monitoring results shall be submitted to:

Department of Environmental Quality - Northern Regional Office (DEQ-NRO)
13901 Crown Court
Woodbridge, VA 22193

Monitoring results shall be reported on a Discharge Monitoring Report (DMR) or on forms provided, approved or specified by the Department.

2. If the permittee monitors any pollutant specifically addressed by this permit more frequently than required by this permit using test procedures approved under Title 40 of the Code of Federal Regulations Part 136 or using other test procedures approved by the U.S. Environmental Protection Agency or using procedures specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or reporting form specified by the Department.

3. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit.

D. Duty to Provide Information.

The permittee shall furnish to the Department, within a reasonable time, any information which the Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Board may require the permittee to furnish, upon request, such plans, specifications, and other pertinent information as may be necessary to determine the effect of the wastes from this discharge on the quality of state waters, or such other information as may be necessary to accomplish the purposes of the State Water Control Law. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.

E. Compliance Schedule Reports

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

F. Unauthorized Discharges

Except in compliance with this permit, or another permit issued by the Board, it shall be unlawful for any person to:

1. Discharge into state waters sewage, industrial wastes, other wastes, or any noxious or deleterious substances; or
2. Otherwise alter the physical, chemical or biological properties of such state waters and make them detrimental to the public health, or to animal or aquatic life, or to the use of such waters for domestic or industrial consumption, or for recreation, or for other uses.

G. Reports of Unauthorized Discharges.

Any permittee who discharges or causes or allows a discharge of sewage, industrial waste, other wastes or any noxious or deleterious substance into or upon state waters in violation of Part II.F.; or who discharges or causes or allows a discharge that may reasonably be expected to enter state waters in violation of Part II.F., shall notify the Department of the discharge immediately upon discovery of the discharge, but in no case later than 24 hours after said discovery. A written report of the unauthorized discharge shall be submitted to the Department, within five days of discovery of the discharge. The written report shall contain:

1. A description of the nature and location of the discharge;
2. The cause of the discharge;
3. The date on which the discharge occurred;
4. The length of time that the discharge continued;
5. The volume of the discharge;
6. If the discharge is continuing, how long it is expected to continue;
7. If the discharge is continuing, what the expected total volume of the discharge will be; and
8. Any steps planned or taken to reduce, eliminate and prevent a recurrence of the present discharge or any future discharges not authorized by this permit.

Discharges reportable to the Department under the immediate reporting requirements of other regulations are exempted from this requirement.

H. Reports of Unusual or Extraordinary Discharges.

If any unusual or extraordinary discharge including a bypass or upset should occur from a treatment works and the discharge enters or could be expected to enter state waters, the permittee shall promptly notify, in no case later than 24 hours, the Department by telephone after the discovery of the discharge. This notification shall provide all available details of the incident, including any adverse affects on aquatic life and the known number of fish killed. The permittee shall reduce the report to writing and shall submit it to the Department within five days of discovery of the discharge in accordance with Part II.I.2. Unusual and extraordinary discharges include but are not limited to any discharge resulting from:

1. Unusual spillage of materials resulting directly or indirectly from processing operations;
2. Breakdown of processing or accessory equipment;
3. Failure or taking out of service some or all of the treatment works; and
4. Flooding or other acts of nature.

I. Reports of Noncompliance

The permittee shall report any noncompliance which may adversely affect state waters or may endanger public health.

1. An oral report shall be provided within 24 hours from the time the permittee becomes aware of the circumstances. The following shall be included as information which shall be reported within 24 hours under this paragraph:
 - a. Any unanticipated bypass; and
 - b. Any upset which causes a discharge to surface waters.
2. A written report shall be submitted within 5 days and shall contain:
 - a. A description of the noncompliance and its cause;
 - b. The period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and
 - c. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

The Board may waive the written report on a case-by-case basis for reports of noncompliance under Part II.I. if the oral report has been received within 24 hours and no adverse impact on state waters has been reported.

3. The permittee shall report all instances of noncompliance not reported under Parts II, I.1. or I.2., in writing, at the time the next monitoring reports are submitted. The reports shall contain the information listed in Part II.I.2.

NOTE: The immediate (within 24 hours) reports required in Parts II, G., H. and I. may be made to the Department's Northern Regional Office at (703) 583-3800 (voice) or (703) 583-3821 (fax). For reports outside normal working hours, leave a message and this shall fulfill the immediate reporting requirement. For emergencies, the Virginia Department of Emergency Services maintains a 24-hour telephone service at 1-800-468-8892.

J. Notice of Planned Changes.

1. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:
 - a. The permittee plans alteration or addition to any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced:
 - 1) After promulgation of standards of performance under Section 306 of Clean Water Act which are applicable to such source; or
 - 2) After proposal of standards of performance in accordance with Section 306 of Clean Water Act which are applicable to such source, but only if the standards are promulgated in accordance with Section 306 within 120 days of their proposal;
 - b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations nor to notification requirements specified elsewhere in this permit; or
 - c. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
2. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

K. Signatory Requirements.

1. All permit applications shall be signed as follows:
 - a. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
 - 1) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or
 - 2) The manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;
 - b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
 - c. For a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a public agency includes:
 - 1) The chief executive officer of the agency, or
 - 2) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

2. All reports required by permits, and other information requested by the Board shall be signed by a person described in Part II.K.1., or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - a. The authorization is made in writing by a person described in Part II.K.1.;
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and
 - c. The written authorization is submitted to the Department.
3. Changes to authorization. If an authorization under Part II.K.2. is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Part II.K.2. shall be submitted to the Department prior to or together with any reports, or information to be signed by an authorized representative.
4. Certification. Any person signing a document under Parts II, K.1. or K.2. shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

L. Duty to Comply.

The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the State Water Control Law and the Clean Water Act, except that noncompliance with certain provisions of this permit may constitute a violation of the State Water Control Law but not the Clean Water Act. Permit noncompliance is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if this permit has not yet been modified to incorporate the requirement.

M. Duty to Reapply.

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee shall apply for and obtain a new permit. All permittees with a currently effective permit shall submit a new application at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Board. The Board shall not grant permission for applications to be submitted later than the expiration date of the existing permit.

N. Effect of a Permit.

This permit does not convey any property rights in either real or personal property or any exclusive privileges, nor does it authorize any injury to private property or invasion of personal rights, or any infringement of federal, state or local law or regulations.

O. State Law.

Nothing in this permit shall be construed to preclude the institution of any legal action under, or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any other state law or regulation or under authority preserved by Section 510 of the Clean Water Act. Except as provided in permit conditions on "bypassing" (Part II.U.), and "upset" (Part II.V.) nothing in this permit shall be construed to relieve the permittee from civil and criminal penalties for noncompliance.

P. Oil and Hazardous Substance Liability.

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Sections 62.1-44.34:14 through 62.1-44.34:23 of the State Water Control Law.

Q. Proper Operation and Maintenance.

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes effective plant performance, adequate funding, adequate staffing, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by the permittee only when the operation is necessary to achieve compliance with the conditions of this permit.

R. Disposal of solids or sludges.

Solids, sludges or other pollutants removed in the course of treatment or management of pollutants shall be disposed of in a manner so as to prevent any pollutant from such materials from entering state waters.

S. Duty to Mitigate.

The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

T. Need to Halt or Reduce Activity not a Defense.

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

U. Bypass.

1. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Parts II, U.2. and U.3.
2. Notice
 - a. Anticipated bypass. If the permittee knows in advance of the need for a bypass, prior notice shall be submitted, if possible at least ten days before the date of the bypass.
 - b. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Part II.I.
3. Prohibition of bypass.
 - a. Bypass is prohibited, and the Board may take enforcement action against a permittee for bypass, unless:
 - 1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - 2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 - 3) The permittee submitted notices as required under Part II.U.2.
 - b. The Board may approve an anticipated bypass, after considering its adverse effects, if the Board determines that it will meet the three conditions listed above in Part II.U.3.a.

V. Upset.

1. An upset constitutes an affirmative defense to an action brought for noncompliance with technology based permit effluent limitations if the requirements of Part II.V.2. are met. A determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is not a final administrative action subject to judicial review.
2. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - a. An upset occurred and that the permittee can identify the cause(s) of the upset;
 - b. The permitted facility was at the time being properly operated;
 - c. The permittee submitted notice of the upset as required in Part II.I.; and
 - d. The permittee complied with any remedial measures required under Part II.S.
3. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

W. Inspection and Entry

The permittee shall allow the Director, or an authorized representative, upon presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act and the State Water Control Law, any substances or parameters at any location.

For purposes of this section, the time for inspection shall be deemed reasonable during regular business hours, and whenever the facility is discharging. Nothing contained herein shall make an inspection unreasonable during an emergency.

X. Permit Actions.

Permits may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

Y. Transfer of permits

1. Permits are not transferable to any person except after notice to the Department. Except as provided in Part II.Y.2., a permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued, or a minor modification made, to identify the new permittee and incorporate such other requirements as may be necessary under the State Water Control Law and the Clean Water Act.
2. As an alternative to transfers under Part II.Y.1., this permit may be automatically transferred to a new permittee if:
 - a. The current permittee notifies the Department at least 30 days in advance of the proposed transfer of the title to the facility or property;
 - b. The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them; and
 - c. The Board does not notify the existing permittee and the proposed new permittee of its intent to modify or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in Part II.Y.2.b.

Z. Severability

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

ATTACHMENT A
DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY CRITERIA MONITORING

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL ⁽¹⁾	REPORTING RESULTS	SAMPLE TYPE ⁽²⁾	SAMPLE FREQUENCY
METALS						
7440-36-0	Antimony, dissolved	(3)	450		G or C	1/5 YR
7440-38-2	Arsenic, dissolved	(3)	62		G or C	1/5 YR
7440-43-9	Cadmium, dissolved	(3)	0.16		G or C	1/5 YR
16065-83-1	Chromium III, dissolved ⁽⁸⁾	(3)	9.8		G or C	1/5 YR
18540-29-9	Chromium VI, dissolved ⁽⁸⁾	(3)	3.5		G or C	1/5 YR
7440-50-8	Copper, dissolved	(3)	0.79		G or C	1/5 YR
7439-92-1	Lead, dissolved	(3)	0.95		G or C	1/5 YR
7439-97-6	Mercury, dissolved	(3)	0.30		G or C	1/5 YR
7440-02-0	Nickel, dissolved	(3)	2.6		G or C	1/5 YR
7782-49-2	Selenium, Total Recoverable	(3)	2.1		G or C	1/5YR
7440-22-4	Silver, dissolved	(3)	0.007		G or C	1/5 YR
7440-28-0	Thallium, dissolved	(4)	(5)		G or C	1/5 YR
7440-66-6	Zinc, dissolved	(3)	7.9		G or C	1/5 YR
PESTICIDES/PCB'S						
309-00-2	Aldrin	608	0.05		G or C	1/5 YR
57-74-9	Chlordane	608	0.2		G or C	1/5 YR
2921-88-2	Chlorpyrifos (synonym = Dursban)	(4)	(5)		G or C	1/5 YR
72-54-8	DDD	608	0.1		G or C	1/5 YR
72-55-9	DDE	608	0.1		G or C	1/5 YR
50-29-3	DDT	608	0.1		G or C	1/5 YR
8065-48-3	Demeton	(4)	(5)		G or C	1/5 YR
333-41-5	Diazinon	(4)	(5)		G or C	1/5YR
60-57-1	Dieldrin	608	0.1		G or C	1/5 YR
959-98-8	Alpha-Endosulfan	608	0.1		G or C	1/5 YR
33213-65-9	Beta-Endosulfan	608	0.1		G or C	1/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL ⁽¹⁾	REPORTING RESULTS	SAMPLE TYPE ⁽²⁾	SAMPLE FREQUENCY
1031-07-8	Endosulfan Sulfate	608	0.1		G or C	1/5 YR
72-20-8	Endrin	608	0.1		G or C	1/5 YR
7421-93-4	Endrin Aldehyde	(4)	(5)		G or C	1/5 YR
86-50-0	Guthion	(4)	(5)		G or C	1/5 YR
76-44-8	Heptachlor	608	0.05		G or C	1/5 YR
1024-57-3	Heptachlor Epoxide	(4)	(5)		G or C	1/5 YR
319-84-6	Hexachlorocyclohexane Alpha-BHC	608	(5)		G or C	1/5 YR
319-85-7	Hexachlorocyclohexane Beta-BHC	608	(5)		G or C	1/5 YR
58-89-9	Hexachlorocyclohexane Gamma-BHC or Lindane	608	(5)		G or C	1/5 YR
143-50-0	Kepone	(9)	(5)		G or C	1/5 YR
121-75-5	Malathion	(4)	(5)		G or C	1/5 YR
72-43-5	Methoxychlor	(4)	(5)		G or C	1/5 YR
2385-85-5	Mirex	(4)	(5)		G or C	1/5 YR
56-38-2	Parathion	(4)	(5)		G or C	1/5 YR
11096-82-5	PCB 1260	608	1.0		G or C	1/5 YR
11097-69-1	PCB 1254	608	1.0		G or C	1/5 YR
12672-29-6	PCB 1248	608	1.0		G or C	1/5 YR
53469-21-9	PCB 1242	608	1.0		G or C	1/5 YR
11141-16-5	PCB 1232	608	1.0		G or C	1/5 YR
11104-28-2	PCB 1221	608	1.0		G or C	1/5 YR
12674-11-2	PCB 1016	608	1.0		G or C	1/5 YR
1336-36-3	PCB Total	608	7.0		G or C	1/5 YR
8001-35-2	Toxaphene	608	5.0		G or C	1/5 YR
BASE NEUTRAL EXTRACTABLES						
83-32-9	Acenaphthene	625	10.0		G or C	1/5 YR
120-12-7	Anthracene	625	10.0		G or C	1/5 YR
92-87-5	Benzidine	(4)	(5)		G or C	1/5 YR
56-55-3	Benzo (a) anthracene	625	10.0		G or C	1/5 YR
205-99-2	Benzo (b) fluoranthene	625	10.0		G or C	1/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL ⁽¹⁾	REPORTING RESULTS	SAMPLE TYPE ⁽²⁾	SAMPLE FREQUENCY
207-08-9	Benzo (k) fluoranthene	625	10.0		G or C	1/5 YR
50-32-8	Benzo (a) pyrene	625	10.0		G or C	1/5 YR
111-44-4	Bis 2-Chloroethyl Ether	(4)	(5)		G or C	1/5 YR
108-60-1	Bis 2-Chloroisopropyl Ether	(4)	(5)		G or C	1/5 YR
117-81-7	Bis-2-ethylhexyl phthalate	625	10.0		G or C	1/5 YR
85-68-7	Butyl benzyl phthalate	625	10.0		G or C	1/5 YR
91-58-7	2-Chloronaphthalene	(4)	(5)		G or C	1/5 YR
218-01-9	Chrysene	625	10.0		G or C	1/5 YR
53-70-3	Dibenz(a,h)anthracene	625	20.0		G or C	1/5 YR
84-74-2	Dibutyl phthalate (synonym = Di-n-Butyl Phthalate)	625	10.0		G or C	1/5 YR
95-50-1	1,2-Dichlorobenzene	624	10.0		G or C	1/5 YR
541-73-1	1,3-Dichlorobenzene	624	10.0		G or C	1/5 YR
106-46-7	1,4-Dichlorobenzene	624	10.0		G or C	1/5 YR
91-94-1	3,3-Dichlorobenzidine	(4)	(5)		G or C	1/5 YR
84-66-2	Diethyl phthalate	625	10.0		G or C	1/5 YR
131-11-3	Dimethyl phthalate	(4)	(5)		G or C	1/5 YR
121-14-2	2,4-Dinitrotoluene	625	10.0		G or C	1/5 YR
122-66-7	1,2-Diphenylhydrazine	(4)	(5)		G or C	1/5 YR
206-44-0	Fluoranthene	625	10.0		G or C	1/5 YR
86-73-7	Fluorene	625	10.0		G or C	1/5 YR
118-74-1	Hexachlorobenzene	(4)	(5)		G or C	1/5 YR
87-68-3	Hexachlorobutadiene	(4)	(5)		G or C	1/5 YR
77-47-4	Hexachlorocyclopentadiene	(4)	(5)		G or C	1/5 YR
67-72-1	Hexachloroethane	(4)	(5)		G or C	1/5 YR
193-39-5	Indeno(1,2,3-cd)pyrene	625	20.0		G or C	1/5 YR
78-59-1	Isophorone	625	10.0		G or C	1/5 YR
98-95-3	Nitrobenzene	625	10.0		G or C	1/5 YR
62-75-9	N-Nitrosodimethylamine	(4)	(5)		G or C	1/5 YR
621-64-7	N-Nitrosodi-n-propylamine	(4)	(5)		G or C	1/5 YR
86-30-6	N-Nitrosodiphenylamine	(4)	(5)		G or C	1/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL ⁽¹⁾	REPORTING RESULTS	SAMPLE TYPE ⁽²⁾	SAMPLE FREQUENCY
129-00-0	Pyrene	625	10.0		G or C	1/5 YR
120-82-1	1,2,4-Trichlorobenzene	625	10.0		G or C	1/5 YR
VOLATILES						
107-02-8	Acrolein	(4)	(5)		G	1/5 YR
107-13-1	Acrylonitrile	(4)	(5)		G	1/5 YR
71-43-2	Benzene	624	10.0		G	1/5 YR
75-25-2	Bromoform	624	10.0		G	1/5 YR
56-23-5	Carbon Tetrachloride	624	10.0		G	1/5 YR
108-90-7	Chlorobenzene (synonym = monochlorobenzene)	624	50.0		G	1/5 YR
124-48-1	Chlorodibromomethane	624	10.0		G	1/5 YR
67-66-3	Chloroform	624	10.0		G	1/5 YR
75-09-2	Dichloromethane (synonym = methylene chloride)	624	20.0		G	1/5 YR
75-27-4	Dichlorobromomethane	624	10.0		G	1/5 YR
107-06-2	1,2-Dichloroethane	624	10.0		G	1/5 YR
75-35-4	1,1-Dichloroethylene	624	10.0		G	1/5 YR
156-60-5	1,2-trans-dichloroethylene	(4)	(5)		G	1/5 YR
78-87-5	1,2-Dichloropropane	(4)	(5)		G	1/5 YR
542-75-6	1,3-Dichloropropene	(4)	(5)		G	1/5 YR
100-41-4	Ethylbenzene	624	10.0		G	1/5 YR
74-83-9	Methyl Bromide	(4)	(5)		G	1/5 YR
79-34-5	1,1,2,2-Tetrachloroethane	(4)	(5)		G	1/5 YR
127-18-4	Tetrachloroethylene	624	10.0		G	1/5 YR
10-88-3	Toluene	624	10.0		G	1/5 YR
79-00-5	1,1,2-Trichloroethane	(4)	(5)		G	1/5 YR
79-01-6	Trichloroethylene	624	10.0		G	1/5 YR
75-01-4	Vinyl Chloride	624	10.0		G	1/5 YR
ACID EXTRACTABLES⁽⁶⁾						
95-57-8	2-Chlorophenol	625	10.0		G or C	1/5 YR
120-83-2	2,4 Dichlorophenol	625	10.0		G or C	1/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL ⁽¹⁾	REPORTING RESULTS	SAMPLE TYPE ⁽²⁾	SAMPLE FREQUENCY
105-67-9	2,4 Dimethylphenol	625	10.0		G or C	1/5 YR
51-28-5	2,4-Dinitrophenol	(4)	(5)		G or C	1/5 YR
534-52-1	2-Methyl-4,6-Dinitrophenol	(4)	(5)		G or C	1/5 YR
25154-52-3	Nonylphenol	(4)	(5)		G or C	1/5 YR
87-86-5	Pentachlorophenol	625	50.0		G or C	1/5 YR
108-95-2	Phenol	625	10.0		G or C	1/5 YR
88-06-2	2,4,6-Trichlorophenol	625	10.0		G or C	1/5 YR
MISCELLANEOUS						
776-41-7	Ammonia as NH3-N	350.1	200		C	1/5 YR
16887-00-6	Chlorides	(4)	(5)		C	1/5 YR
7782-50-5	Chlorine, Total Residual	(4)	100		G	1/5 YR
57-12-5	Cyanide, Free	(4)	10.0		G	1/5 YR
7783-06-4	Hydrogen Sulfide	(4)	(5)		G or C	1/5 YR
60-10-5	Tributyltin ⁽⁷⁾	NBSR 85-3295	(5)		G or C	1/5 YR
471-34-1	Hardness (mg/L as CaCO ₃)	(4)	(5)		G or C	1/5 YR

Name of Principal Executive Officer or Authorized Agent/Title

Signature of Principal Officer or Authorized Agent/Date

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. Sec. 1001 and 33 U.S.C. Sec. 1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum imprisonment of between 6 months and 5 years.)

FOOTNOTES:

- (1) Quantification level (QL) is defined as the lowest concentration used for the calibration of a measurement system when the calibration is in accordance with the procedures published for the required method.

The quantification levels indicated for the metals are actually Specific Target Values developed for this permit. The Specific Target Value is the approximate value that may initiate a wasteload allocation analysis. Target values are not wasteload allocations or effluent limitations. The Specific Target Values are subject to change based on additional information such as hardness data, receiving stream flow, and design flows.

Units for the quantification level are micrograms/liter unless otherwise specified.

Quality control and quality assurance information shall be submitted to document that the required quantification level has been attained.

- (2) Sample Type

G = Grab = An individual sample collected in less than 15 minutes. Substances specified with "grab" sample type shall only be collected as grabs. The permittee may analyze multiple grabs and report the average results provided that the individual grab results are also reported. For grab metals samples, the individual samples shall be filtered and preserved immediately upon collection.

C = Composite = A 24-hour (**PW - Revise as required to require same composite duration as BOD₅**) composite unless otherwise specified. The composite shall be a combination of individual samples, taken proportional to flow, obtained at hourly or smaller time intervals. The individual samples may be of equal volume for flows that do not vary by +/- 10 percent over a 24-hour period.

- (3) A specific analytical method is not specified; however a target value for each metal has been established. An appropriate method to meet the target value shall be selected from the following list of EPA methods (or any approved method presented in 40 CFR Part 136). If the test result is less than the method QL, a "<[QL]" shall be reported where the actual analytical test QL is substituted for [QL].

<u>Metal</u>	<u>Analytical Method</u>
Antimony	1638; 1639
Arsenic	1632; 206.5
Chromium ⁽⁸⁾	1639
Cadmium	1637; 1638; 1639; 1640
Chromium VI	1639; 218.6 Rev 3.3
Copper	1638; 1640
Lead	1637; 1638; 1640
Mercury	1631; 245.7 Rev 2.0
Nickel	1638; 1639; 1640
Selenium	1638; 1639
Silver	1638
Zinc	1638; 1639

- (4) Any approved method presented in 40 CFR Part 136.
- (5) The QL is at the discretion of the permittee. For any substances addressed in 40 CFR Part 136, the permittee shall use one of the approved methods in 40 CFR Part 136.
- (6) Testing for phenols requires continuous extraction.
- (7) Analytical Methods: NBSR 85-3295 or DEQ's approved analysis for Tributyltin may also be used [See A Manual for the Analysis of Butyltins in Environmental Systems by the Virginia Institute of Marine Science, dated November 1996].
- (8) Both Chromium III and Chromium VI may be measured by the total chromium analysis. If the result of the total chromium analysis is less than or equal to the lesser of the Chromium III or Chromium VI

method QL, the results for both Chromium III and Chromium VI can be reported as "<[QL]", where the actual analytical test QL is substituted for [QL].

- (9) The lab may use SW846 Method 8270D provided the lab has an Initial Demonstration of Capability, has passed a PT for Kepone, and meets the acceptance criteria for Kepone as given in Method 8270D